

admitting the possibility of the Starfishes having been drifted by currents, for argument's sake, the character of the fact would be in no way affected. The structure and habits of the Echinoderms generally are too well known, however, to render such a mode of accounting for their presence in the position referred to possible.

On careful dissection, I found no appreciable anatomical difference between these *Ophiocomæ* and the species frequenting shoal waters. The deposit on which they rested consists of *Globigerinæ*, so pure as to constitute 95 per cent. of the entire mass. Their occurrence where the *Globigerinæ* are to be met with both in greatest quantity and purity, together with the circumstance that in the stomach of the *Ophiocomæ* the *Globigerinæ* were detected in abundance as alimentary matter, corroborates the evidence I have obtained from other facts as to the normal habitat of the latter organisms being on the immediate surface-layer of the deeper oceanic deposits, and not in the substance of the superincumbent waters. At the same time it substantiates the truth of the Starfishes having been captured on their natural feeding-ground.

I also detected, in a sounding made at 1913 fathoms, a number of small tubes varying in length from $\frac{1}{16}$ th to $\frac{1}{4}$ th of an inch, and about a line in diameter, which, on being viewed under the microscope, turned out to be almost entirely built up of young *Globigerina*-shells cemented side by side, just as we find to be the case in the tubular cells of some of the Cephalobranchiate Annelids, where sandy or shell particles are employed in their formation. There can hardly be a doubt, therefore, that some minute creature, probably an Annelid, lives down at this enormous depth, and feeds on the soft parts of the Foraminifera, whilst he houses himself with their calcareous shells. As yet, I have been unable to determine the nature of these creatures, but hope to be enabled to succeed on a more lengthened survey of the material in which they occur.

Lastly, I would mention having met with the minute bodies termed "Coccoliths" by Professor Huxley. They occur in vast numbers, associated with larger cell-like bodies on the surface of which Coccoliths are arranged at regular intervals, so as to lead to the inference that the latter are in reality given off from the former in some way. The larger cell-bodies and the Coccoliths on them are imbedded in a gelatinous envelope. The presence of these organisms in largest quantity in those deposits in which the *Globigerinæ* occur alive in the greatest profusion and utmost state of purity, would also seem indicative of their being a larval condition of the latter.

I remain, Gentlemen, very faithfully yours,

G. C. WALLICH.

Dr. HILGARD'S "*Organotaxis*."

The *à-priori* or transcendental method in anatomy has evidently strong charms for some of our transatlantic brethren. In the 'Transactions' of the Academy of Science of St. Louis for 1859, vol. i. no. 3. p. 416, there is a paper by one of the curators, Dr. Theodore C. Hilgard, M.D., "on *Organotaxis*," in which the dreamy and imaginative Oken is out-Okened. One good effect of this curious

production of our voluble contemporary will be to show what may be done by a good tall fellow in this line of business, especially when such a worker is unyoked from reason and judgment. We shall give a specimen of Dr. Hilgard's paper—not to instruct, but to warn the student; whilst the mere quotation of the author will be tantamount to putting him in the pillory.

Thus, in page 418, speaking of what he calls "the pterygo-maxillary extremity" (of the cranium), Dr. Hilgard says*: "The fin or hand to this extremity we find in perfect likeness to a bat's hands, in the lake muscalounge (*masque-allongée*, *Esox* sp., length 5 feet). The interior ones, agglutinated to the nasal vertebra, constitute the *nasal bones* of the face; the stout second forms the *true maxillaries*, with teeth, like the nasal bones inclusive of sesamoids; the third, a finger of five bones, forms the infra-orbital osselets, in likeness of a cartilaginous *nostril-wing* surrounding the jawless orbit; the fourth is a long arcuate beam, with a terminal phalanx agglutinated, a *labial* forming the outer mask-bone of the upper jaw; and the fifth or thumb, a labial *stump* as the thumb of bats and birds. The numbers of digital phalanges, as of cyclar elements, may vary among the different cyclar numbers." And in page 427 we have this profound utterance:—"The eye is the representative of the seed or focal cycle, forming the centre and climax of floral as well as visceral cyclosis."

Under the heading "Somatic Strata, Visceral Cycles, and Cryptogamæ," at page 424, we have the *cytosporous*, *aërifero-membranous*, *scatent*, *incrustate-cancellate*, and *spiral* elements, types, characters, and functions. To the first the following lucid passage applies:—"The *cytosporous* or cell-shedding, pulverulent cycles' function—the fervid and vital, fermentative and effervescent action—, we find largely and emphatically represented in the diffuse, cytogenetic, and, *par excellence*, eremacaustic fungine thallus, mouldy, pervasive, katalytic, chafing and consuming, under the form of fermentation, the noctilucous decay of wood and of putrid decomposition. Like the central caloric of Earth, it inhabits the *bulk* of substances. In animate organisms, we find its function repeated in the (fermentatively) specific action of cellular contents, of the glands, olfactorio-intestinal crypts, the brains and ganglia, the fat and marrow. The nerves supplying organs once severed, says Reclam, the specific action of the glands becomes tempestuously paramount, producing heat and excitement; a proof of the inherency of bio-chemical action in the glands, while to the nerves, brains, and the ganglionic masses belong the specifically *bio-dynamic* energies. The antheral process of fructification in Aroids is known to produce considerable heat. The sudatory mucorine spores, like a moist dew, fore-fashion perspiration; their fermentative exhalation of carbonic acid gas, respiration," &c. &c. &c.

The art of finding silly similitudes and aptless analogies can neither be advanced much further than the author pushes it, nor more flauntingly arrayed in sounding words than in this classico-technico-American garment of wordy nonsense.

* The *italics* are the author's own.